

Book Review

PHYSICIAN TO THE GENE POOL

James V. Neel

New York: John Wiley & Sons, 1994

Jim Neel has led a most productive and energetic life, which has been intellectually and personally fruitful. This book about his life, his work, and his suggestions about the future of mankind is set in a gentle but strong rhetorical style, which is a written image of the man himself. I have never heard a negative comment about the man or his work. He has, in my mind, many of the personal skills of a James Crow and not the irascibility or, perhaps, the impatience of an H. J. Muller, with whom I worked while they were interfacing with Neel.

The first 13 chapters of "Physician to the Gene Pool" are autobiographical. The last six chapters are a rumination about genetics, the gene pool, and the world. In between are two chapters explaining modern genetic principles. As a geneticist, I enjoyed reading these two chapters especially because they portray the clarity of thought and expression of a good teacher. Concepts are correctly presented and explained concisely, a wonderful review of what we know.

In the autobiographical section, we get mainly a history of Jim's professional life and the circumstances and turns which led him from *Drosophila* research to medical school, to a serendipitous moment when his military service, medical and genetic training came together to put him in the right spot to initiate studies on atomic bomb survivors. The research, its findings, and the change in our view of radiation-induced mutation are presented in some detail. This momentous study would be enough for most researchers' life time contribution, but the study of the upper Amazonian Amerindians and their genetic composition was added to an already vigorous field schedule. The findings among the Yanomama are truly a classical genetic population study which we all followed in the 1960s, 1970s, and 1980s, and more is coming.

It's typical, I suppose, at how little we get to know of this very private man in this book. Only on occasion do we get a hint of a private life or of joy outside of scientific discovery. A loving wife and family are not prominent in the book, but I gather were of major importance in Jim's lifetime. His setting up of family domestic quarters in Japan and his wife Priscilla joining him on later trips to the Amazon hint at the importance of her

presence. There is one aside, a personal note, on page 267, where he salutes his brother-in-law, Gordon Quarten, the husband of Priscilla's identical twin. The praise given this good man is: "Our intellectual joustings over dinner were often the high spot of the week."

The last six chapters present the problems facing the world, especially from the point of view of the population geneticist. The problems of the new genetics are numerous and important, but minor, in the author's opinion, to the problem of survival of humankind, with its wide cultural and genetic variation. That we will survive is not seriously questioned but that we can survive without a cataclysm seems only possible if we control population growth.

Two-child families is the universally proposed solution, leading to an eventual reduction in population size from the present, but many years into the future. This size family should be adopted in all cultures and peoples so as not to allow individual advantages or disadvantages. While enforcement of such a regulation is accepted as necessary, exactly how it would be implemented is not stated. Obviously, universal acceptance of responsibility would be ideal, but successful movement toward this end is referred to in parts of the world where highly coercive methods have been or are being tried.

If a two-child family is the rule, then genetic counseling and prenatal diagnosis with selective abortion would be of great importance. It is interesting that abortion in cases of birth defects is strongly supported, but the time for abortion is repeatedly stated as up to 20 weeks.

A senior geneticist might be expected to devote attention to the genetics of aging and the "Physician to the Gene Pool" does. However, this area is given the lowest priority for research spending, given that it may produce little of value, i.e., more time but not better quality time, but primarily because we have a growing gerontocracy already, and more needs to be spent on the young.

This book is not light reading, but "Physician to the Gene Pool" is interesting and a glimpse of the life, work, and thought of a unique professional and gentle man.

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